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EXAMINER	
PHAM, THOMAS K	
ART UNIT	**PAPER NUMBER**
2121	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/479,031	GRANT ET AL.	
	Examiner	Art Unit	
	Thomas K. Pham	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *129,133-146 and 150-171* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *129,133-146 and 150-171* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. This action is in response to request for continued examination filed on 12/05/2005

2. Applicants' arguments, with respect to the new issues of claims 129, 146, 158 and 171, necessitated new ground(s) of rejection presented in this Office action.

Quotations of U.S. Code Title 35

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ541, 550-551 (CCPA 1969)" (MPEP p2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. The Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

Claim Objections

8. Claim 129 is objected to because of the following informalities: except for the preamble, the term "handheld apparatus", as amended on lines 7 and 8, is not consistent with other claimed limitations of a "handheld computer device". Appropriate correction is required.

Claim Rejections - 35 USC § 103

9. Claims 129, 133-137, 141-146, 150-156 and 158-171 rejected under 35 U.S.C. 103(a) as being unpatentable over Sunshine et al. U.S. Patent no. 6,085,576 (hereinafter Sunshine) in view of U.S. Patent No. 6,238,338 ("DeLuca").

Regarding claim 129

Sunshine teaches a handheld apparatus including

- a hardware interface to be connected to a computer device and to at least one attachable sensor – see FIG. 11, the e-nose device (hardware interface) with a sensor attached is connected to a host computer device,
- the at least one attachable sensor to perform data acquisition when attached to the hardware interface – see col. 2 lines 28-37 and col. 12 lines 42-46,
- and be programmable by the computer device – see FIG. 11 and col. 11 lines 25-32;
- a data module to interact with at least one sensor and with the computer device – see FIG. 14s, col. 17 lines 62-67, col. 18 lines 7-59, i.e. user interact with the menu screen on the e-nose device;
- a display module to display data collection results on a display of the computer device – see FIG. 11 and col. 11 lines 30-31, i.e. the host computer retrieved result from the e-nose device,
- the display module including a user interface to allow users of the computer device to interact with the computer device during the data acquisition – see col. 11 lines 25-32, i.e. the host computer includes a user interface for update/program the e-nose device.

Sunshine does not specifically teach the computer device which connected to the hardware interface is a handheld computer device.

However, DeLuca teaches a biosignal monitoring system including a handheld remote control station (15, 22) for controlling plurality of sensors as shown in FIG. 1s and 2s and column 3 lines 11-29.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the handheld control station of DeLuca with the system of Sunshine

because it would provide for the purpose of having a monitor device that is programmable, portable, and convenience for the users.

Regarding claim 146

Sunshine teaches a handheld apparatus including a handheld apparatus comprising:

- a computer device – see FIG. 11, host computer 1110;
- an attachable sensor to perform data acquisition – see FIG. 1 and col. 5 lines 45-59;
- an adjustable module connected to the computer device and to the sensor – see column 6 lines 4-15,
- the adjustable module processing data received from the sensor and displaying the data on a display of the computer device – see FIG. 11 and col. 11 lines 30-31, i.e. the host computer retrieved result from the e-nose device,
- the sensor to perform data acquisition when connected to the adjustable module – see col. 2 lines 28-37 and col. 12 lines 42-46,
- and be programmable by the computer device – see FIG. 11 and col. 11 lines 25-32;
- and a user interface connected to the computer device, the user interface allowing users of the computer device to interact with the computer device during the data acquisition – see col. 11 lines 25-32, i.e. the host computer includes a user interface for update/program the e-nose device.

Sunshine does not specifically teach the computer device which connected to the hardware interface is a handheld computer device.

However, DeLuca teaches a biosignal monitoring system including a handheld remote control station (15, 22) for controlling plurality of sensors as shown in FIG. 1s and 2s and column 3 lines 11-29.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the handheld control station of DeLuca with the system of Sunshine because it would provide for the purpose of having a monitor device that is programmable, portable, and convenience for the users.

Regarding claim 158

Sunshine teaches the invention including a method comprising:

- receiving data from an attachable sensor connected to an attachable device – see column 5 lines 45-59,
- the attachable sensor performing data acquisition when connected to the attachable device – see FIG. 1 and col. 5 lines 45-59,
- wherein the attachable device is connected to a computer device – see FIG. 11,
- and the attachable sensor is programmable by the computer device – see FIG. 11 and col. 11 lines 25-32;
- processing the data at the attachable device – see column 6 lines 35-57;
- allowing users of the computer device to interact with the computer device during the data acquisition – see col. 11 lines 25-32, i.e. the host computer includes a user interface for update/program the e-nose device;
- and providing results of the processing to the computer device for display – see FIG. 11 and col. 11 lines 30-31, i.e. the host computer retrieved result from the e-nose device.

Sunshine does not specifically teach the computer device which connected to the hardware interface is a handheld computer device.

However, DeLuca teaches a biosignal monitoring system including a handheld remote control station (15, 22) for controlling plurality of sensors as shown in FIG. 1s and 2s and column 3 lines 11-29.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the handheld control station of DeLuca with the system of Sunshine because it would provide for the purpose of having a monitor device that is programmable, portable, and convenience for the users.

Regarding claim 171

Sunshine teaches the invention including an apparatus comprising:

- means for receiving data from at least one attachable sensor connected to an attachable device – see column 5 lines 45-59,
- the attachable sensor performing data acquisition when connected to the attachable device – see FIG. 1 and col. 5 lines 45-59,
- therein the attachable device is connected to a computer device – see FIG. 11,
- and the attachable sensor is programmable by the computer device – see FIG. 11 and col. 11 lines 25-32;
- means for processing the data at the attachable device – see column 6 lines 35-57;
- means for allowing users of the computer device to interact with the computer device during the data acquisition – see col. 11 lines 25-32, i.e. the host computer includes a user interface for update/program the e-nose device; and

- means for providing results of the processing to the computer device for display – see FIG. 11 and col. 11 lines 30-31, i.e. the host computer retrieved result from the e-nose device.

Sunshine does not specifically teach the computer device which connected to the hardware interface is a handheld computer device.

However, DeLuca teaches a biosignal monitoring system including a handheld remote control station (15, 22) for controlling plurality of sensors as shown in FIG. 1s and 2s and column 3 lines 11-29.

- Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the handheld control station of DeLuca with the system of Sunshine because it would provide for the purpose of having a monitor device that is programmable, portable, and convenience for the users.

Regarding claim 133

Sunshine teaches a memory module to store data supplied by the at least one sensor (col. 8 lines 32-36, "Operation of e-nose device ... other configuration information").

Regarding claims 134, 153 and 163

Sunshine teaches the data module further configured to calibrate the at least one sensor (col. 15 lines 36-38, "a Target mode, in which ... to samples of known identity").

Regarding claim 136

Sunshine teaches a power source (col. 21 lines 32-40, "The e-nose device ... of the power pack").

Regarding claim 137

Sunshine teaches at least one sensor but do not teach a sensor for assessing chemical composition of a liquid sample (col. 5 lines 53, "a sample includes chemical analytes, odors, vapors and others").

Regarding claims 135 and 156

Sunshine teaches the apparatus of claim 129 further comprising an alert module to notify a user of the apparatus of an event based on data provided by the at least one sensor (col. 21 lines 10-15, "Graphics and icons assist ... are quick, simple, and reliable").

Regarding claim 141

Sunshine teaches at least one sensor but do not teach a sensor for detecting temperature (col. 14 lines 59-63, "I/Os that can be controlled ... a humidity probe").

Regarding claims 142 and 150

Sunshine teaches the at least one sensor is an analog sensor (col. 10 lines 27-33, "Various sensors suitable for ... infrared sensors").

Regarding claims 143 and 151

Sunshine teaches the at least one sensor is a digital sensor (col. 14 lines 59-63, "I/Os that can be controlled ... a humidity probe").

Regarding claims 144 and 152

Sunshine teaches the data module includes an analog-to-digital converter (fig. 12a, element 1230).

Regarding claim 145

Sunshine teaches the data module processes the data prior to display of the data collection results on the display (col. 2 lines 64-67, "The analyzer is configured ... analytes within the test sample").

Regarding claims 154 and 159

Sunshine teaches the adjustable module further generates graphical representation of the data received from the sensor (col. 21 lines 10-15, "Graphics and icons assist users ... quick, simple and reliable").

Regarding claims 155 and 164

Sunshine teaches the adjustable module further directs the sensor to change data collection features of the sensor based on at least one user instruction (col. 18 lines 1-6, "available in the main menu: ... a set of available methods").

Regarding claim 160

Sunshine teaches the processing the data includes converting the data into digital form (col. 13 lines 27-30, "A status signal from ... channel for digitization").

Regarding claim 161

Sunshine teaches the processing the data includes determining whether an event occurs (col. 16 lines 18-23, "the processor processes any ... the target operating mode").

Regarding claim 162

Sunshine teaches generating alert signal to display at the handheld computer device if the event occurs (col. 16 lines 36-43, "Otherwise, if the selected ... is the default mode").

Regarding claim 165

Tarrant teaches changing options of the sensor based on at least one instruction of the user (col. 2 lines 50-54, "The user can later program ... overall system efficiency").

Regarding claim 166

Sunshine teaches the options include sampling rates (col. 15 lines 20-22, "The ADC sampling rate ... to the host computer").

Regarding claim 167

Sunshine teaches the options include a scale of measurement (col. 19 lines 6-14, "The various modules ... may be plugged in").

Regarding claim 168

Sunshine is silent on the options include measurement units. However, it is obvious to one of ordinary skill in the art at the time the invention was made to include a measurement units for any type of measurement taken as test sample for analyzing in order to achieve an accurate result based on the amount of samples taken.

Regarding claim 169

Sunshine teaches changing display of the data based on user actions (col. 5 lines 64-66, "A display 120a and several ... by the operator").

Regarding claim 170

Sunshine teaches the user actions are provided via a set of controls of the handheld computer device (col. 5 lines 48-58, "e-nose device 100 is ... from an industrial valve assembly").

10. Claims 138-140 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunshine in view DeLuca and further in view of Amano et al. U.S. Patent No. 5,941,837 (hereinafter Amano).

Regarding claim 138

Sunshine and DeLuca teach a handheld apparatus with at least one sensor but do not teach a sensor for monitoring athletic activity. However, Amano teaches a sensor for monitoring athletic activity (col. 20 lines 36-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the activity monitoring sensor of Amano with the apparatus of Sunshine and DeLuca because it would provide for measuring the user's pulse rate and the exercise amount in order to provide guidance to the athlete's performance.

Regarding claim 139

Sunshine and DeLuca teach a handheld apparatus with at least one sensor but do not teach a sensor for detecting acceleration changes. However, Amano teaches the apparatus wherein the at least one sensor is a sensor for detecting acceleration changes (col. 16 line 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the acceleration changes sensor of Amano with the apparatus of Sunshine and DeLuca because it would provide for determining the body moment in accordance with the measurement of the pulse rate sensor in order to provide guidance to the athlete's performance.

Regarding claim 140

Sunshine and DeLuca teach a handheld apparatus with at least one sensor but do not teach a sensor for detecting light. However, Amano teaches a sensor for detecting light (col. 16 lines 19-21). It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the light detector of Amano with the apparatus of Sunshine and DeLuca because it would provide for measuring the user's pulse rate from the light emitting diode in order to provide guidance to the athlete's performance.

11. Claim 157 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sunshine in view of DeLuca and further in view of Amano and further in view of McNabb U.S. Patent no. 5,927,603 and further in view of Durbin et al. U.S. Patent No. 6,039,258 (hereinafter Durbin) and further in view of King et al U.S. Patent No. 4,565,999 (hereinafter King).

Regarding claim 157

Sunshine and DeLuca teach a handheld apparatus with at least one sensor selected from a group including a biological sensor, a weight sensor, a temperature sensor, an infrared sensor but do not teach an acceleration sensor, a radiation sensor, a bar code sensor, an inventory tag sensor, a motion sensor, a pH level sensor, a heart monitor sensor. However, Amano teaches an acceleration sensor (col. 16 line 28) and a heart monitor sensor (col. 20 lines 36-40). Furthermore, McNabb teaches a chemical sensor and a pH level sensor (col. 12 lines 58-63). Furthermore, Durbin teaches a bar code sensor, an inventory tag sensor (col. 4 lines 18-23) and a motion sensor (col. 7 lines 60-66). In addition, King teaches the apparatus including a radiation sensor (col. 8 lines 10-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Amano with the apparatus of Sunshine and DeLuca because it would provide for determining athlete activities in accordance with the measurement of the heath's monitoring sensors in order to provide guidance to the athlete's performance. Furthermore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the sensors of McNabb with the apparatus of Sunshine and DeLuca because it would provide for detecting any chemical composition such as moisture content within soil for analysis in order to improve the soil condition. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Durbin with the apparatus of Sunshine and DeLuca because it would provide for data collecting operation that activated upon triggering a motion sensors. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of King with the apparatus of Sunshine and DeLuca because it would provide for detecting radiation patterns in order to recognize the direction of an object in translational motions.

Response to Arguments

In the remark, the applicants argue that cited reference fails to teach:

I) "a user interface to allow users of the handheld apparatus to interact with the handheld apparatus during the data acquisition." As in claims 129, 146, 158 and 171.

In response to applicants' arguments,

I) Prior art Sunshine (USPN 6,085,576) discloses updating and reprogramming the sensor with a computer device (host computer 1110) with new information so that the sensor can identify various target vapors as described in FIG. 11 and column 11 lines 25-31. Although Sunshine does not specifically disclose that the host computer 1110 could be a handheld computer device, however, prior art DeLuca (USPN 6,238,338) teaches a biosignal monitoring

system including a handheld remote control station (15, 22) for programming and controlling plurality of sensors as shown in FIG. 1s and 2s and column 3 lines 11-29. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the handheld control station of DeLuca with the system of Sunshine because it would provide for the purpose of having a monitor device that is programmable, portable, and convenience for the users.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

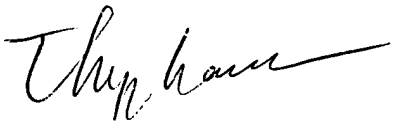
Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-

3689, Monday - Friday from 7:30 AM - 4:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.** Responses may also be faxed to the **official fax number (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Primary Examiner



December 19, 2006